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Molecular tectonics: Grid and porous coordination networks based on combinations of iron thiocyanate and pyridyl appended derivatives of tetrathiacalix[4]arene and tetramercaptotetrathiacalix[4]arene

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Abstract

© ISUCT Publishing. The combination of three pyridyl appended tetrathiacalix[4]arene (TCA) and tetramercaptotetrathiacalix[4]arene (TMTCA) derivatives in 1,3-alternate imposed conformation behaving as neutral tectons with octahedral FeII(NCS)2 complex as a metallatecton, leads to the formation of new coordination networks. Whereas the tecton 4, a tetrasubstituted TCA derivative (pyridyl in ortho position), leads to a 2D grid-like network, for the other two tectons 5 and 6, the formation of 3D diamond-like architectures is observed.

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Keywords

Coordination polymer, Iron(II) thiocyanate, Molecular tectonics, Tetramercaptotetrathiacalix[4]arene, Tetrathiacalix[4]arene